

Notice of Allowability

Application No.

10/823,021

Examiner

BJ Forman

Applicant(s)

TSINBERG ET AL.

Art Unit

1634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers of 17 November 2006 and interview of 30 January 2007.
2. ☒ The allowed claim(s) is/are 1,3-15,17-19 and 21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

BJ Forman
Primary Examiner
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NOTICE OF ALLOWABILITY

Election/Restrictions

Claim 1 is directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(B), claims 13-15, 17-19, directed to the process of making or using an allowable product, previously withdrawn from consideration as a result of a restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Because all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, **the restriction requirement as set forth in the Office action mailed on 12 April 2006 is hereby withdrawn.** In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Status of the Claims

This action is in response to papers filed 17 November 2006 in which claims 1, 3, 9, 12, 15 and 21 were amended, claim 2 was canceled. This action is further in response to amendments discussed and agreed upon during an interview on 30 January 2007 between the examiner and Mr. Schumann.

The previous rejections in the Office Action dated 19 July 2006 are withdrawn in view of the amendments. The amendments place all pending claims in condition for allowance.

Claims 1, 3-15, 17-19, 21 are in condition for allowance.

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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James J. Schumann on 30 January 2007.

The application has been amended as follows:

A. Replace Claim 15 with the following:

15. (currently amended) A method of making a device according to claim 1 for holding immobilized biological material and exposing said immobilized biological material to a test solution for potential reaction therewith as a part of an assay, which method comprises:

providing a flat plate in which there are formed a group of holes which extend completely therethrough, which holes are arranged in a regular pattern,

associating a hydrophobic microporous membrane with the undersurface of said plate so as to close the bottom of each of said holes and thereby create a plurality of microwells which are defined by the thickness of the plate,

attaching said membrane to the undersurface of said plate in regions that surround the perimeter about each of said holes in a manner so as to create a barrier against diffusion of a liquid solution, to be supplied to said wells, through said membrane and

applying at least one microdroplet of prepolymer hydrogel material to the upper surface of the membrane in each of at least a plurality of said wells in a manner so as to polymerize and cover only a minor portion of the surface area of said well bottom and associating said biological material with the polymerizing microdroplet so as to become immobilized as a part thereof, whereby drainage of an aqueous solution through said hydrophobic membrane at the

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bottom of each said well can be effected by the application of vacuum to the undersurface of said membrane.

B. Cancel Claim 16.

C. Replace Claim 17 with the following:

17. (amended) The method of claim 15 wherein said spots are located generally centrally of the bottom surface of each well.

D. Replace Claim 21 with the following:

21. (currently amended) A multiwell device for holding liquid solutions in the wells and allowing reaction to occur between the solution and immobilized biological material in the wells as a part of an assay, which device comprises:

a flat plate in which there are formed a plurality of wells by holes which extend completely through the thickness of said plate, wherein the sidewalls of said holes provide walls of said wells which are substantially liquid impervious,

a microporous material closing the bottom of each said hole,

at least one three-dimensional spot of a crosslinked hydrogel polymer attached to only a portion of an upper surface area of said microporous material at the bottom of each of a plurality of said wells so that drainage can be effected through the portion of said surface area without said hydrogel polymer, and

biological material so immobilized on or within the hydrogel polymer as to be contactable by liquid supplied to said well.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The claims are drawn to a device comprising a well plate having microporous material in the bottom of the wells. The well bottom also comprises biological material immobilized on or with a hydrogel polymer that covers only a portion of the well bottom/microporous material, leaving a substantial portion of the well bottom without gel. The partial covering of the well bottom permits drainage through the well when desired e.g. following reaction within the well. The prior art does not teach or reasonably suggest a hydrogel partially covering a microporous well bottom as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

Claims 1, 3-15, 17-19, 21 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

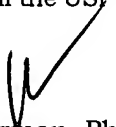
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.



BJ Forman, Ph.D.
Primary Examiner
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January 30, 2007